



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,561	01/17/2001	Robert Wayne Glenn JR.	8386	6898

27752 7590 01/14/2004

THE PROCTER & GAMBLE COMPANY  
INTELLECTUAL PROPERTY DIVISION  
WINTON HILL TECHNICAL CENTER - BOX 161  
6110 CENTER HILL AVENUE  
CINCINNATI, OH 45224

EXAMINER

SHEIKH, HUMERA N

ART UNIT	PAPER NUMBER
----------	--------------

1615

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/764,561

**Applicant(s)**

GLENN ET AL.

**Examiner**

Humera N. Sheikh

**Art Unit**

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,12-15,22-25 and 41-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,12-15,22-25 and 41-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### Status of the Application

Receipt of the request for extension of time (3 months), the Request for Continued Examination (RCE) under Rule 1.114 and the Preliminary Amendment, all filed 10/14/03 is acknowledged.

Claims 1, 3-9, 12-15, 22-25 and 41-42 are pending. Claims 1 and 22-24 have been amended. Claims 2, 10, 11, 16-21, 26 and 27 have been cancelled. Claims 28-40 were previously withdrawn from consideration in a Restriction Requirement. Claims 1, 3-9, 12-15, 22-25 and 41-42 are rejected.

Newly submitted claim 43 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: New claim 43 is drawn to a dual component treatment composition comprising a first component comprised of a liquid emulsifiable concentrate of a reactive agent and a second component comprised of a separate aqueous concentrate whereas the original invention is drawn to a treatment composition comprising a liquid emulsifiable concentrate of a reactive agent.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 43 has been *withdrawn* from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1, 3-9, 12-15, 22-25, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gough *et al.* (US Pat. No. 5,525,332) in view of Deppert *et al.* (US Pat. No. 5,087,733).**

Gough teaches a cosmetic treatment composition of substrates comprising a polymer with a silicone functional group (polymer of the claimed "electrophilic reactive group") (see reference cols. 12-13). The polymer is used in cosmetic preparations (emulsions) for conditioning of the hair and is provided incorporating an azalactone-functionalized copolymer consisting of vinyl azalactone and methacryloyl

Art Unit: 1615

polydimethylsiloxane monomers (see abstract and cols. 7-8). A method of treating a substrate with a cosmetic agent to impart cosmetic benefits is also taught, comprising (a) providing the cosmetic agent as molecules thereof having chemically bonded thereto at least one azalactone substituent moiety for reaction with a nucleophilic reactive site on the substrate and (b) applying the azalactone functionalized cosmetic agent to the substrate to effect reaction of the or each azalactone moiety with a respective nucleophilic reactive site on the substrate, whereby the molecules are chemically bonded to the substrate to impart cosmetic benefits (col. 3, lines 21-35).

The azalactone functionalized cosmetic agent is present in the composition in an amount from about 0.00001 to 20% by weight of the composition (instant claims require ~ 0.01% to ~ 20%) (see col. 8, lines 64-66).

Solvents include volatile or non-volatile silicones and hydrocarbons (col. 8). Emulsifiers are used to stabilize the emulsified particles (col. 9, lines 12-20). Surfactants (anionic, nonionic, amphoteric, and/or zwitterionic) may be used singularly or in combination and are present in a total amount of from about 1 to about 40% by weight (instant claims require from ~ 2 to ~ 40%). Suitable anionic surfactants include alkyl sulphates and alkyl ether sulphates, whereby the alkyl ether sulphates, alkyl ether phosphates and alkyl ether carboxylates may contain an average of from 1 to 10 ethylene oxide or propylene oxide units per molecule, and preferably containing 2 to 3 ethylene oxide units per molecule on average. Nonionic surfactants suitable for use include condensation products of aliphatic ( $C_8$ - $C_{18}$ ) primary or secondary linear or

Art Unit: 1615

branched chain alcohols or phenols with alkylene oxides, usually ethylene oxide and generally having from 6 to 30 ethylene oxide groups (col. 9, line 21- col. 10, line 32).

Additional cosmetic agents that may be included are conditioning agents, styling/setting/bodying agents, fiber straightening agents, colorants, dyeing agents, etc. Examples of conditioning agents include cationic surfactants, cationic polymers, volatile and/or non-volatile silicones and derivatives thereof, *fatty alcohols* and mixtures thereof (col. 10, line 33 – col. 11, line 12). The compositions demonstrate enhanced deposition of the polymer by way of reaction if the functional group with the nucleophilic group is on the substrate.

Group is silent as to a nucleophilic reactive group of a thiol type reactive agent.

*Deppert* teaches such a reactive agent at Example IV, column 6. Such thiol reactive agents are used in conditioning of hair substrates. Due to their molecular structure, the molecules are capable of forming covalent bonds with the sulfhydryl radicals of the hair (see col. 9). Conventional additives including surfactants and emulsifying agents are included at col. 10.

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to use the teachings of *Deppert* within the teachings of *Gough* because both *Deppert* and *Gough* teach that similar effective conditioning results could be achieved and both teach that the claimed polymers are useful due to their chemical affinity to substrates including hair. The expected result would be an effective hair conditioning formulation for the treatment of hair.

Art Unit: 1615

Regarding the instant percentages and/or amounts, it is the position of the Examiner that one of ordinary skill in the art would be capable of determining suitable amounts or percentages through the use of routine or manipulative experimentation to obtain the best possible results, as these are variable parameters.

### ***Response to Arguments***

The applicant's arguments filed 10/14/03 have been fully considered, but were not found to be persuasive.

The applicant argued, "Both Gough and Deppert are silent with regard to the specific surfactant system comprising the combination of a C<sub>8</sub>-C<sub>16</sub> alkyl ethoxylate with two to seven ethoxylates with a dispersing aide selected from one or more of a C<sub>5</sub>-C<sub>10</sub> alcohol, which is required by amended Claim 1. Secondly, neither teaches or suggests a means to accomplish the present invention's low energy emulsification of a reactive agent in a non-aqueous system that is able to self or spontaneously emulsify upon dilution with water or a separate aqueous composition. There is no suggestion or motivation to modify the references, as none of the references, either alone or in combination, recognize the problem which the present invention has solved, i.e., low energy emulsification with minimal or no agitation by the consumer."

These arguments have been fully considered, but were not found to be persuasive. Gough teaches a cosmetic treatment composition of substrates comprising a polymer with a silicone functional group (polymer of the claimed "electrophilic reactive

Art Unit: 1615

group") (see reference cols. 12-13). The polymer is used in cosmetic preparations (emulsions) for conditioning of the hair and is provided incorporating an azalactone-functionalized copolymer consisting of vinyl azalactone and methacryloyl polydimethylsiloxane monomers (see abstract and cols. 7-8). Suitable anionic surfactants include alkyl sulphates and alkyl ether sulphates, whereby the alkyl ether sulphates, alkyl ether phosphates and alkyl ether carboxylates may contain an average of from 1 to 10 ethylene oxide or propylene oxide units per molecule, and preferably containing 2 to 3 ethylene oxide units per molecule on average. Nonionic surfactants suitable for use include condensation products of aliphatic (C<sub>8</sub>-C<sub>18</sub>) primary or secondary linear or branched chain alcohols or phenols with alkylene oxides, usually ethylene oxide and generally having from 6 to 30 ethylene oxide groups (col. 9, line 21- col. 10, line 32). Gough teaches the use of fatty alcohols at col. 10. Deppert additionally teaches the use of benzyl alcohol and cetyl alcohol at cols. 13 and 14.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, *Gough* teaches a polymer with a silicone functional group (polymer of the claimed "electrophilic reactive group"). Surfactants (anionic, nonionic, amphoteric, and/or zwitterionic) and emulsifiers



Art Unit: 1615

that are used to stabilize the emulsified particles are also taught. The compositions demonstrate enhanced deposition of the polymer by way of reaction if the functional group with the nucleophilic group is on the substrate. Gough is silent as to a nucleophilic reactive group of a thiol type reactive agent. *Deppert* teaches and was relied upon for the teaching of such a reactive agent as seen in Example IV. Such thiol reactive agents are used in conditioning of hair substrates. Due to their molecular structure, the molecules are capable of forming covalent bonds with the sulfhydryl radicals of the hair. The prior art teaches a similar formulation comprising similar ingredients for a related purpose. Hence, the instant invention remains obvious and unpatentable over the prior art of record.

### Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (703) 308-4429. The examiner can normally be reached on Monday through Friday from 7:00A.M. to 4:30P.M. After February 04, 2004, the Examiner can be reached at (571) 272-0604.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached on (703) 308-2927 and at (571) 272-0602 after February 04, 2004. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 09/764,561

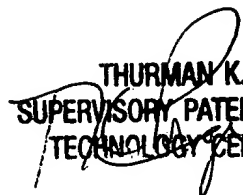
Page 9

Art Unit: 1615

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

*hns*

January 06, 2004

  
THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600